



**Material Safety Data Sheet**

**TOPCHOICE™ INSECTICIDE**

MSDS Number: 102000012961

MSDS Version 2.0

Revision Date: 07/15/2005

**SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

<b>Product Name</b>	TOPCHOICE™ INSECTICIDE
<b>MSDS Number</b>	102000012961
<b>EPA Registration No.</b>	432-1217
<b>Product Use</b>	Insecticide for pest control operators and commercial use only to control fire ants in turfgrass and landscape beds. In addition, mole crickets, fleas, ticks and nuisance ants are controlled for a limited time by the fire ant treatment.

Bayer Environmental Science  
 2 T.W. Alexander Drive  
 Research Triangle PK, NC 27709  
 USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call 1-800-334-7577 (24 hours/day)  
 For Product Information call 1-800-331-2867

**SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Fipronil	120068-37-3	0.0143

**SECTION 3. HAZARDS IDENTIFICATION**

*NOTE: Please refer to Section 11 for detailed toxicological information.*

**Emergency Overview** Caution! Harmful if absorbed through skin. Causes eye irritation. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling.

<b>Physical State</b>	solid granular
<b>Odor</b>	odourless
<b>Appearance</b>	grey
<b>Routes of Exposure</b>	Ingestion, Eye contact, Skin Absorption, Inhalation
<b>Immediate Effects</b>	
<b>Eye</b>	Causes eye irritation. Do not get in eyes.
<b>Skin</b>	Harmful if absorbed through skin. Avoid contact with skin and clothing. May cause skin irritation.



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<b>Ingestion</b>	Ingestion of large amounts may be harmful (see Signs and Symptoms). Do not take internally.
<b>Inhalation</b>	Avoid breathing dust. No specific effects on humans are known under normal use conditions.
<b>Chronic or Delayed Long-Term</b>	This product does not contain any ingredients designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

**SECTION 4. FIRST AID MEASURES**

<b>General</b>	Have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Eye</b>	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
<b>Skin</b>	Take off all contaminated clothing immediately. Rinse immediately with plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.
<b>Ingestion</b>	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.
<b>Inhalation</b>	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
<b>Notes to Physician</b>	
<b>Signs and Symptoms</b>	In severe cases of overexposure by oral ingestion, lethargy, muscle tremors, and, in extreme cases, possibly convulsions, may occur.
<b>Treatment</b>	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

**SECTION 5. FIRE FIGHTING MEASURES**

<b>Flash Point</b>	not applicable
<b>Suitable Extinguishing Media</b>	water spray, foam, dry chemical, carbon dioxide (CO2)



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**Fire Fighting Instructions**

Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Dike area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated.

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions**

Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

**Methods for Cleaning Up**

Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional Advice**

Use personal protective equipment. Do not allow material to enter streams, sewers, or other waterways.

**SECTION 7. HANDLING AND STORAGE**

**Handling Procedures**

Handle and open container in a manner as to prevent spillage.

**Storing Procedures**

Do not contaminate water, food, or feed by storage or disposal.

Store in original container. Store in an area that is out of reach of children and animals, away from the home or home garden.

**Work/Hygienic Procedures**

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. As soon as practical, wash thoroughly and change into clean clothing.

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**General Protection**

Follow all label instructions. Educate and train employees in safe use of the product.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.



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<b>Engineering Controls</b>	Ensure adequate ventilation. Use with local exhaust ventilation.
<b>Eye/Face Protection</b>	Safety glasses with side-shields
<b>Hand Protection</b>	Waterproof gloves
<b>Body Protection</b>	Wear long-sleeved shirt and long pants and shoes plus socks.
<b>Respiratory Protection</b>	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or Industry recommendations.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	grey
<b>Physical State</b>	solid granular
<b>Odor</b>	odourless
<b>pH</b>	8.1
<b>Bulk Density</b>	49.3 lb/cu ft
<b>Water Solubility</b>	dispersible

### SECTION 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Exposure to sunlight. Exposure to extreme heat.
<b>Incompatibility</b>	strong acids strong bases strong oxidizing agents
<b>Hazardous Decomposition Products</b>	Thermal decomposition can lead to release of: Carbon oxides sulphur compounds

### SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on this product as formulated. The inhalation LC50 study was bridged from a similar granular formulation containing the active ingredient, fipronil. The non-acute



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information pertains to the technical-grade active ingredient.

<b>Acute Oral Toxicity</b>	male/female rat: LD50: > 5,000 mg/kg
<b>Acute Dermal Toxicity</b>	male/female rabbit: LD50: > 2,000 mg/kg
<b>Acute Inhalation Toxicity</b>	male/female rat: LC50: > 5.2 mg/l Exposure time: 4 h Determined in the form of dust. (actual)
	male/female rat: LC50: > 20 mg/l Exposure time: 1 h Determined in the form of dust. Extrapolated from the 4 hr LC50. (actual)
<b>Skin Irritation</b>	rabbit: non-irritant
<b>Eye Irritation</b>	rabbit: Mild eye irritation
<b>Sensitization</b>	guinea pig: Non-sensitizing
<b>Chronic Toxicity</b>	Fipronil caused liver, kidney or thyroid effects and/or neurobehavioral effects (e.g., tremors) in chronic toxicity studies in rats and dogs. Fipronil did not induce any microscopic lesions in the neural tissues.

**Assessment Carcinogenicity**

The EPA has classified fipronil as a Category C carcinogen based on thyroid tumors in rats only. These tumors are produced by a mechanism which is not relevant to human cancer. Fipronil did not produce an increase in tumor incidence in mice.

- ACGIH**  
None.
- NTP**  
None.
- IARC**  
None.
- OSHA**  
None.

**Reproductive & Developmental Toxicity**      **REPRODUCTION:** Fipronil was not considered a primary reproductive toxicant in rats. Reproductive effects (e.g., decreased pup body weights) were observed but were considered secondary to maternal toxicity.

**DEVELOPMENTAL TOXICITY:** Fipronil was not a developmental toxicant in rats and rabbits.

**Neurotoxicity**      Fipronil caused transient neurobehavioral effects (e.g., tremors) in neurotoxicity studies in rats. Delays in developmental landmarks were observed in rats at



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maternally toxic doses.

**Mutagenicity** Fipronil was not genotoxic in a battery of in vitro and in vivo mutagenicity studies.

**SECTION 12. ECOLOGICAL INFORMATION**

**Toxicity to Fish** Lepomis macrochirus (Bluegill sunfish)  
flow-through test  
LC50: 85 µg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient fipronil.  
Mean concentration.

Rainbow trout (Oncorhynchus mykiss)  
flow-through test  
LC50: 248 µg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient fipronil.  
Mean concentration.

**Acute Toxicity to Aquatic Invertebrates** Daphnia  
flow-through test  
EC50: 190 µg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient fipronil.  
Mean concentration.

**Toxicity to Other Organisms** Mallard duck  
LC50: > 5,000 mg/kg  
Exposure time: 8 d  
The value mentioned relates to the active ingredient fipronil.  
Dietary concentrations. Mean concentration.

Bobwhite quail  
LC50: 48 mg/kg  
Exposure time: 8 d  
The value mentioned relates to the active ingredient fipronil.  
Dietary concentrations. Mean concentration.

**Environmental Precautions** Toxic to fish. Toxic to birds. This product is toxic to aquatic and estuarine invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product only as specified on the label.



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**SECTION 13. DISPOSAL CONSIDERATIONS**

**General Disposal Guidance** Pesticide wastes are acutely hazardous. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal** Do not re-use empty containers. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.

**SECTION 14. TRANSPORT INFORMATION**

**DOT CLASSIFICATION:**  
Not regulated for Domestic Surface Transportation

**FREIGHT CLASSIFICATION:**  
Insecticides or Fungicides, N.O.I.; other than poison

**SECTION 15. REGULATORY INFORMATION**

**EPA Registration No.** 432-1217

**US Federal Regulations**

**TSCA list**

None.

**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**

None.

**SARA Title III - Section 302 - Notification and Information**

None.

**SARA Title III - Section 313 - Toxic Chemical Release Reporting**

None.

**US States Regulatory Reporting**

**CA Prop65**

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

**US State Right-To-Know Ingredients**

None.

**Canadian Regulations**

**Canadian Domestic Substance List**

None.

**Environmental**



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**CERCLA**

None.

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

None.

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**SECTION 16. OTHER INFORMATION**

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NFPA 704 (National Fire Protection Association):

Health - 1      Flammability - 0      Reactivity - 0      Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: Re-numbered due to system update; Updated Sections as needed.

Revision Date: 07/15/2005

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